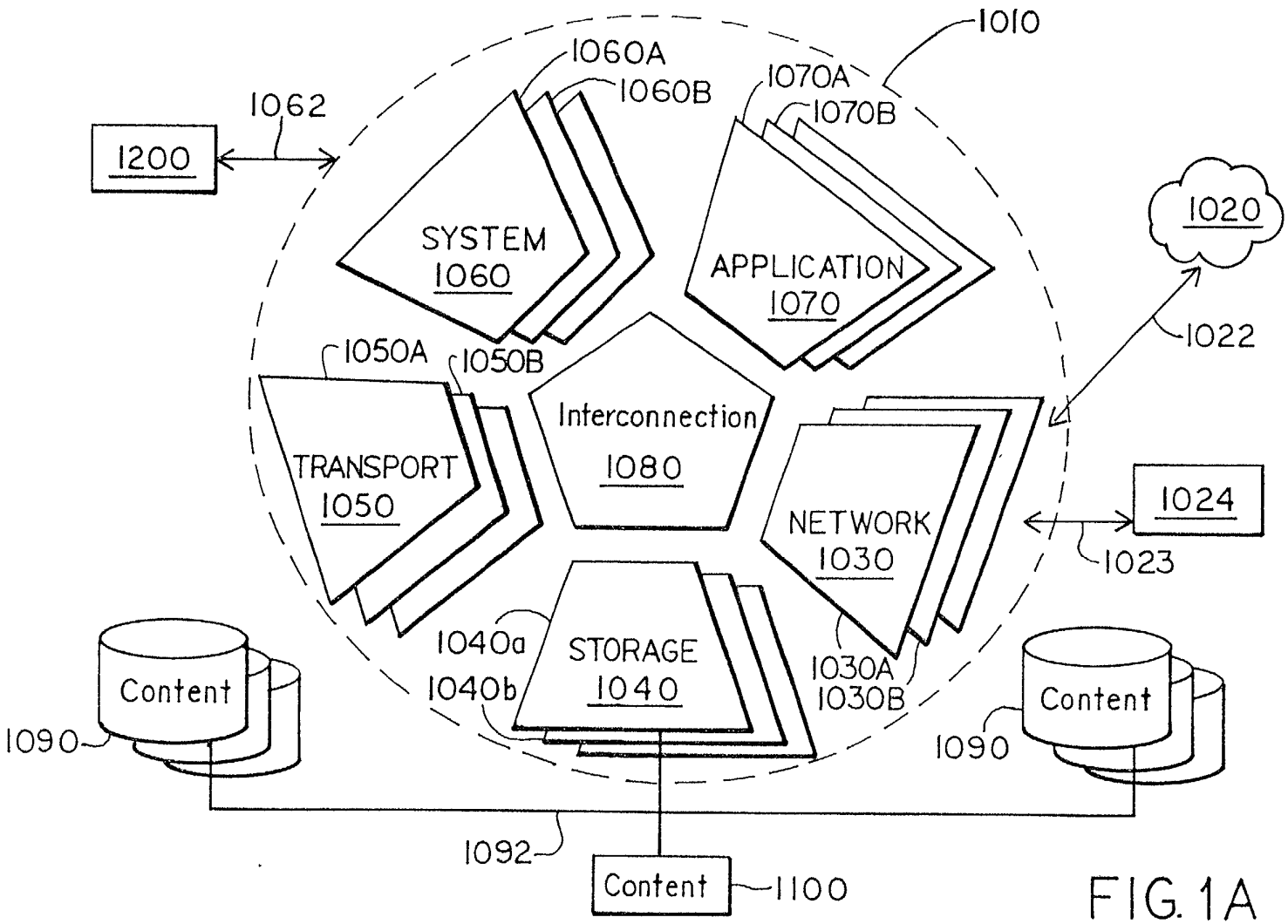
1010
1060A
1060B
1070A
1070B
1062
1200
SYSTEM
1060
APPLICATION
1070
1020
1022
1050A
1050B
Interconnection
1080
TRANSPORT
1050
NETWORK
1030
1024
1023
1040a
1040b
STORAGE
1040
1030A
1030B
Content
1090
Content
1090
1092
Content
1100

FIG. 1A

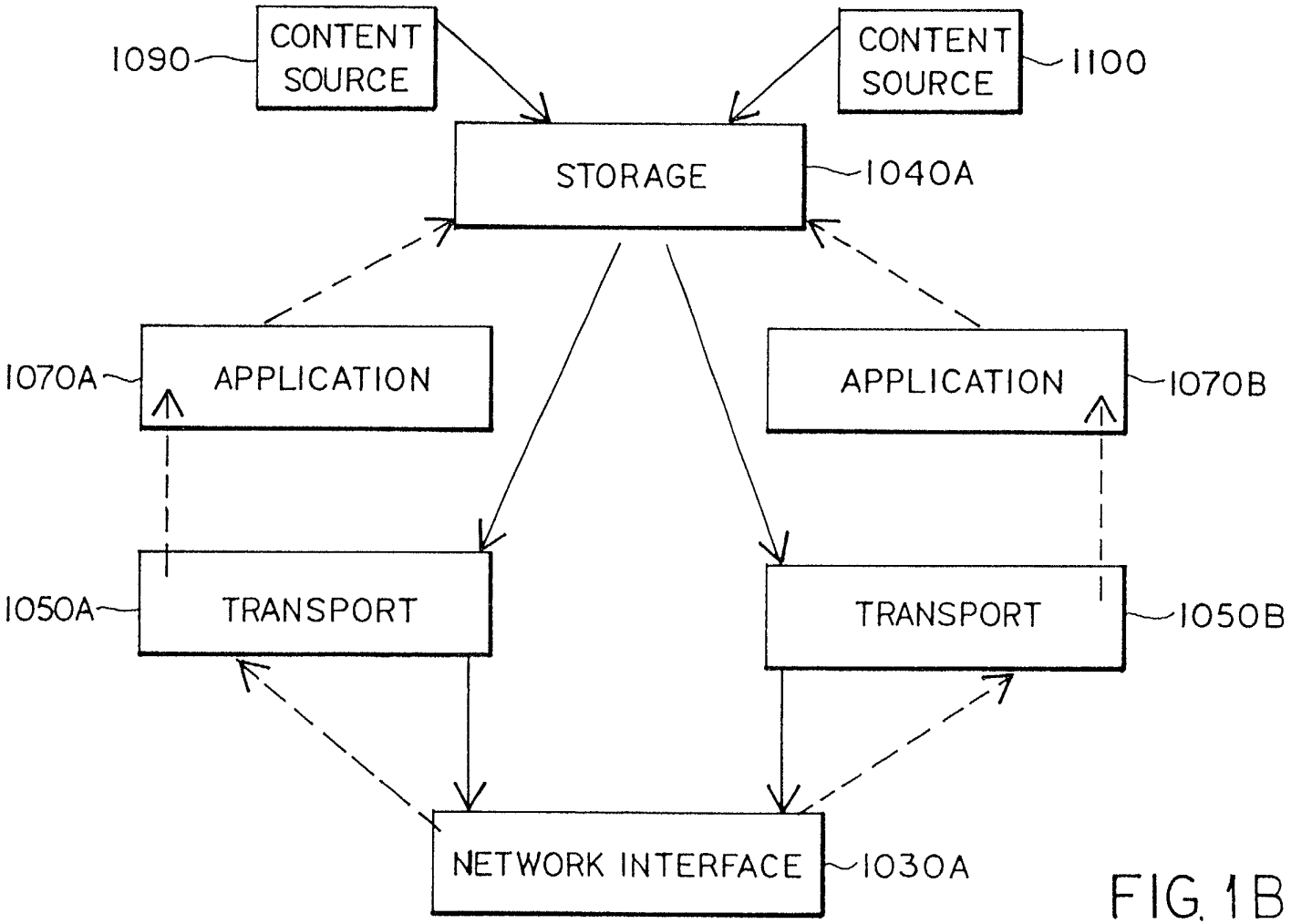
1090
CONTENT SOURCE
CONTENT SOURCE
1100
STORAGE
1040A
1070A
APPLICATION
APPLICATION
1070B
1050A
TRANSPORT
TRANSPORT
1050B
NETWORK INTERFACE
1030A

FIG. 1B

FIG.1C | FIG. 1C' | FIG. 1C''

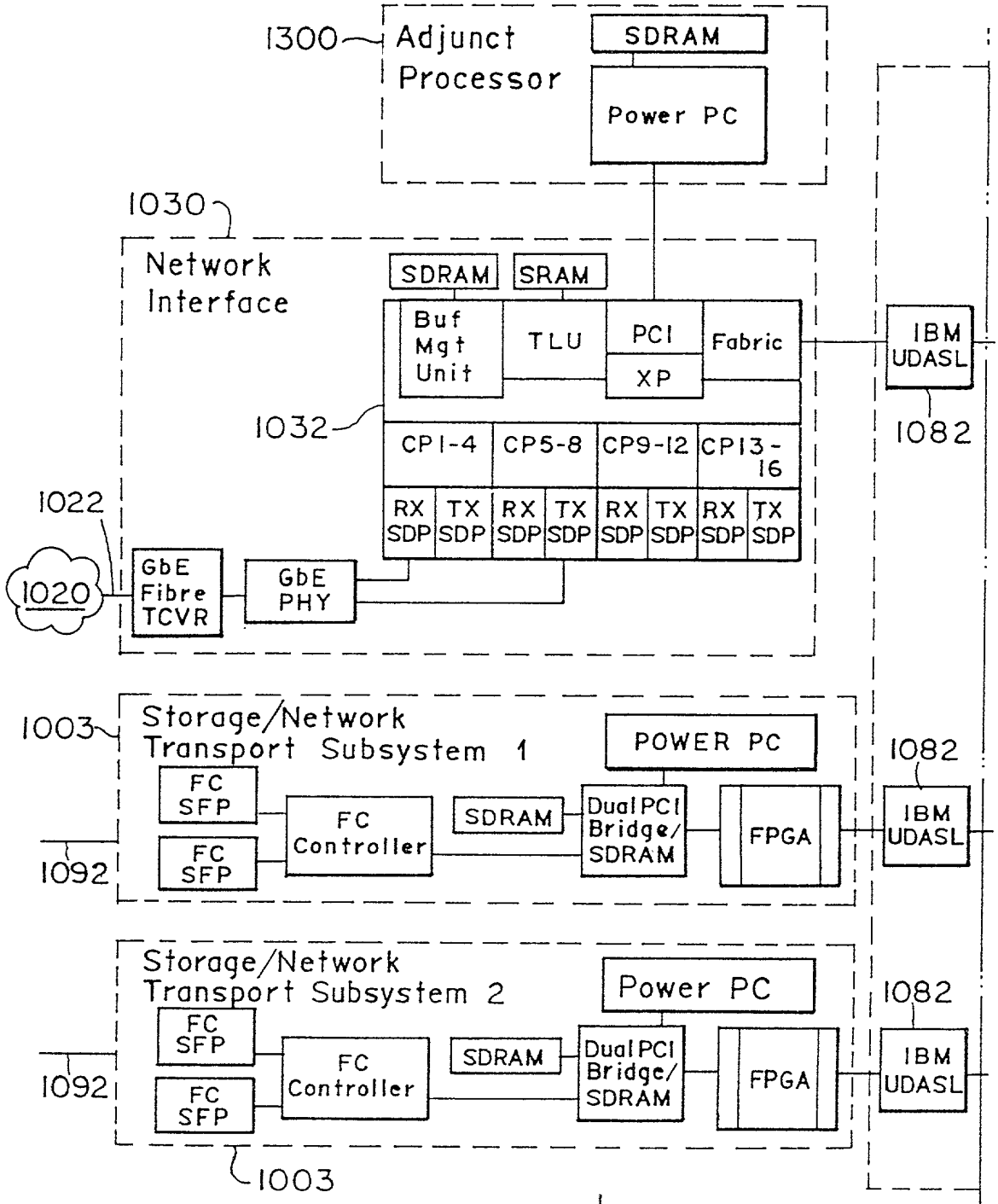

FIG. 1C'

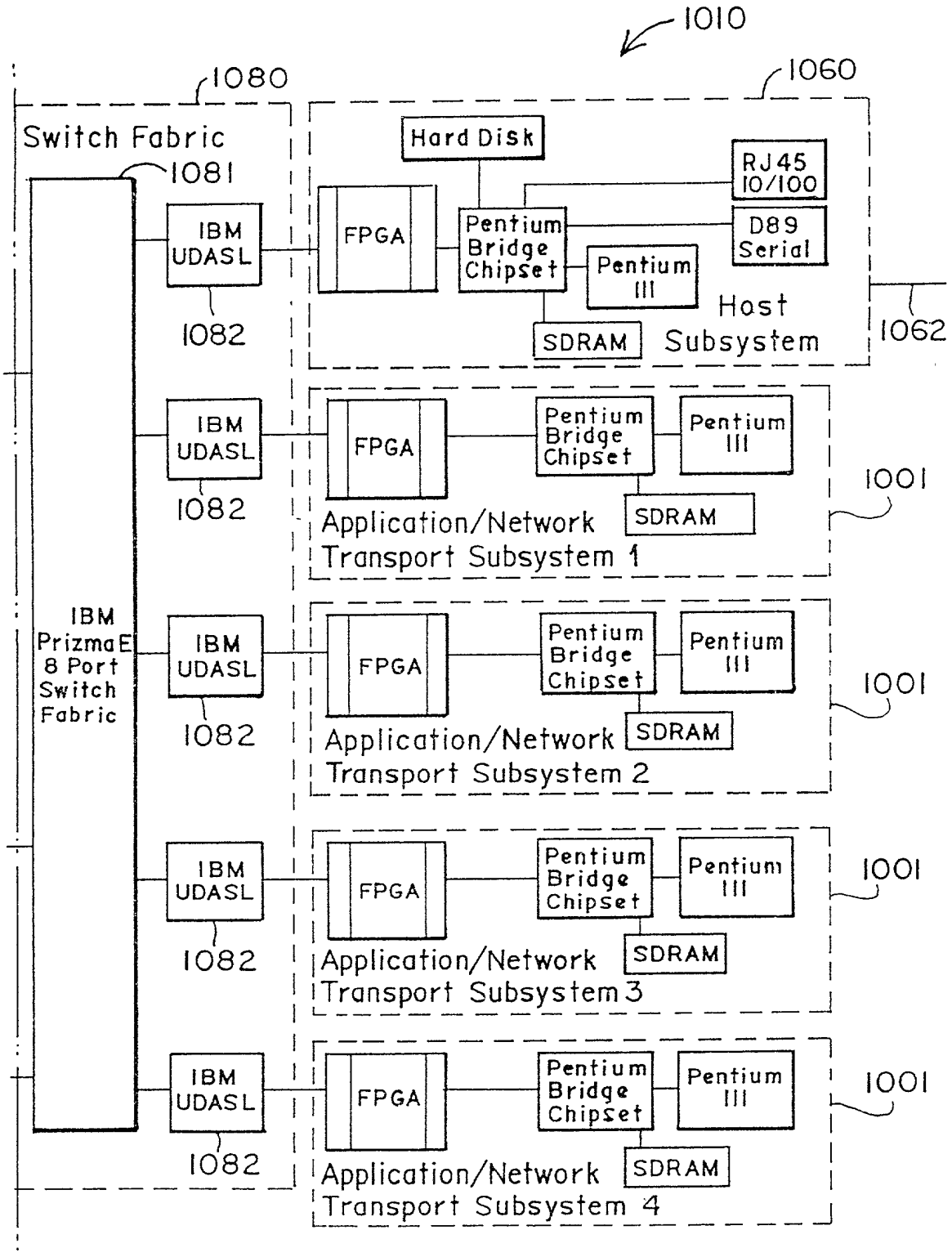
1010
1080
1060
Switch Fabric
1081
Hard Disk
RJ45
10/100
IBM
UDASL
FPGA
Pentium
Bridge
Chipset
D89
Serial
Pentium
III
Host
Subsystem
1062
SDRAM
1082
Application/Network
Transport Subsystem 1
1001
Application/Network
Transport Subsystem 2
Application/Network
Transport Subsystem 3
Application/Network
Transport Subsystem 4
IBM
PrizmaE
8 Port
Switch
Fabric

FIG. 1C[11]

FIG.1D | FIG.1D' | FIG.1D''

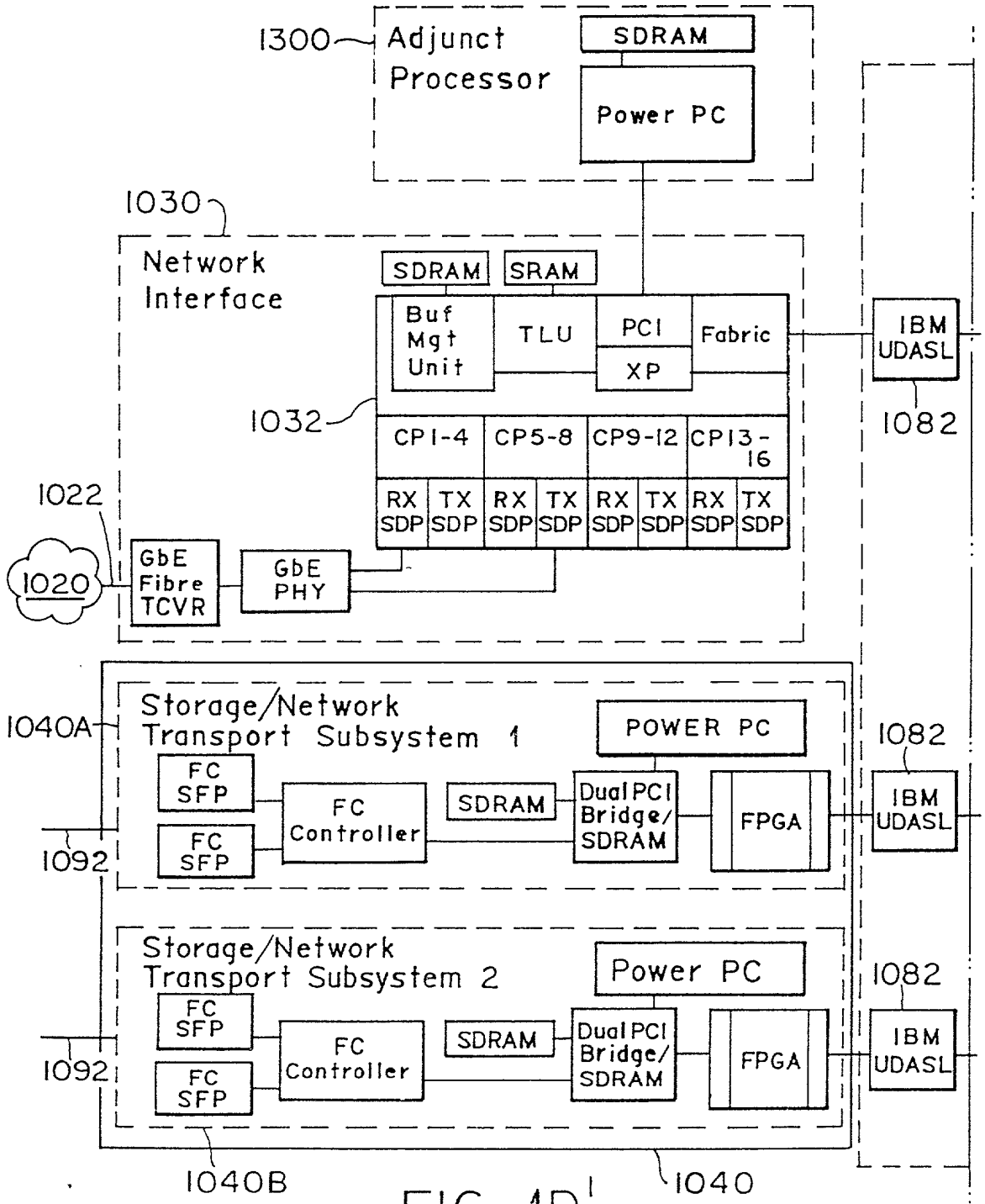

FIG. 1D'

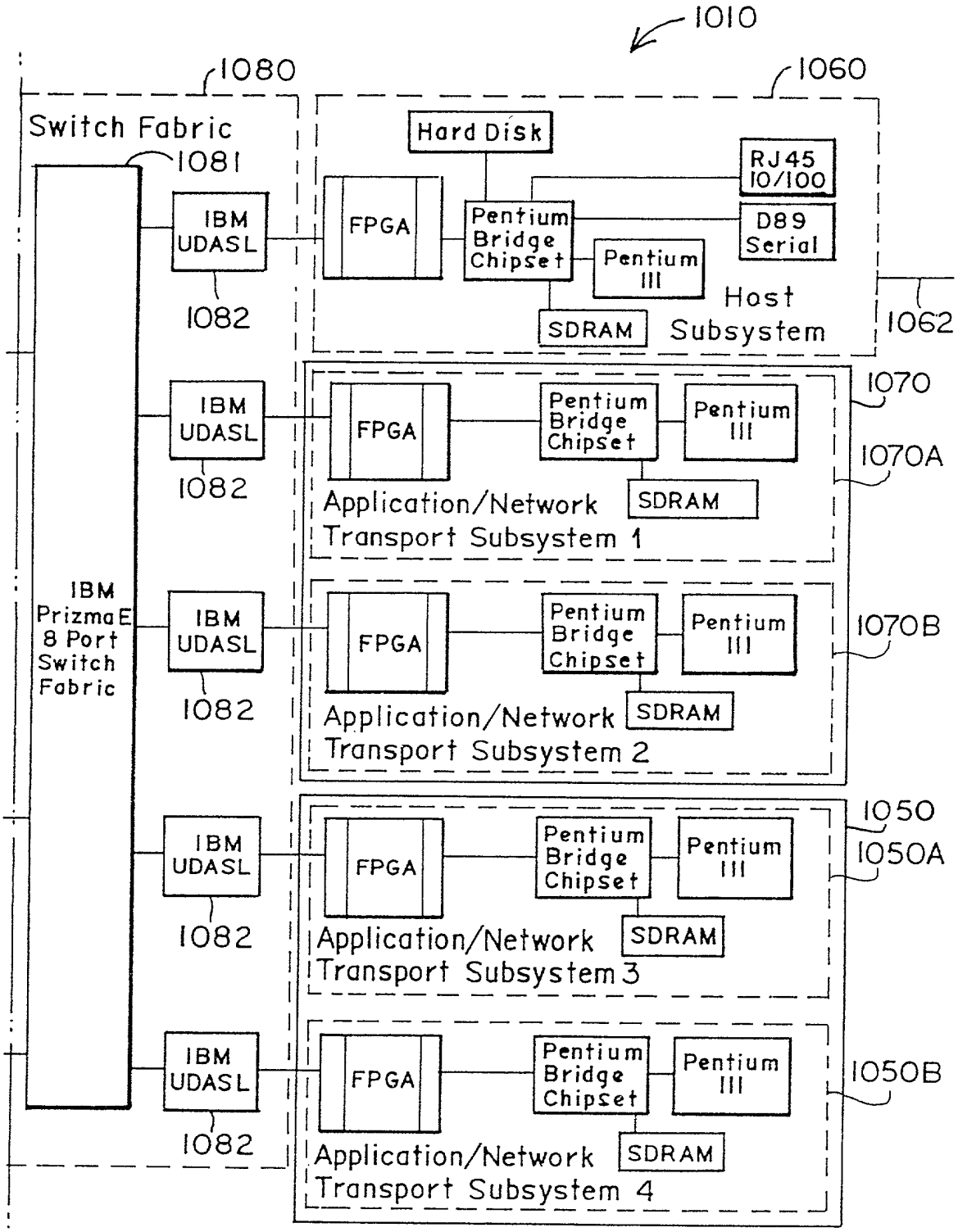
1010
1080
1060
Switch Fabric
1081
Hard Disk
RJ45 10/100
D89 Serial
IBM UDASL
FPGA
Pentium Bridge Chipset
Pentium III
SDRAM
Host Subsystem
1062
1082
1070
1070A
Application/Network Transport Subsystem 1
1070B
Application/Network Transport Subsystem 2
IBM PrizmaE 8 Port Switch Fabric
1050
1050A
Application/Network Transport Subsystem 3
1050B
Application/Network Transport Subsystem 4

FIG. 1D[11]

FIG. 1E | FIG. 1E' | FIG. 1E''

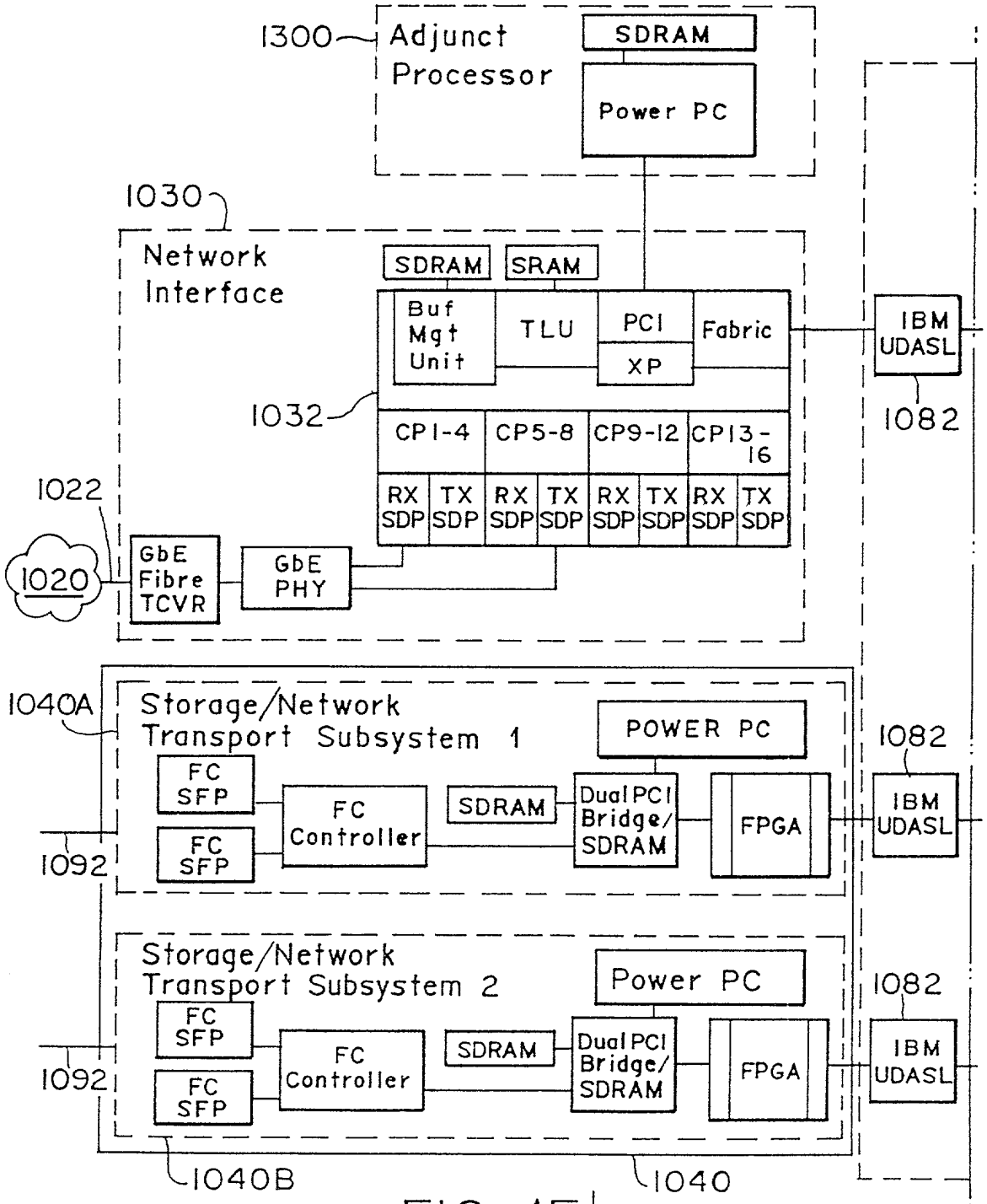

FIG. 1E'

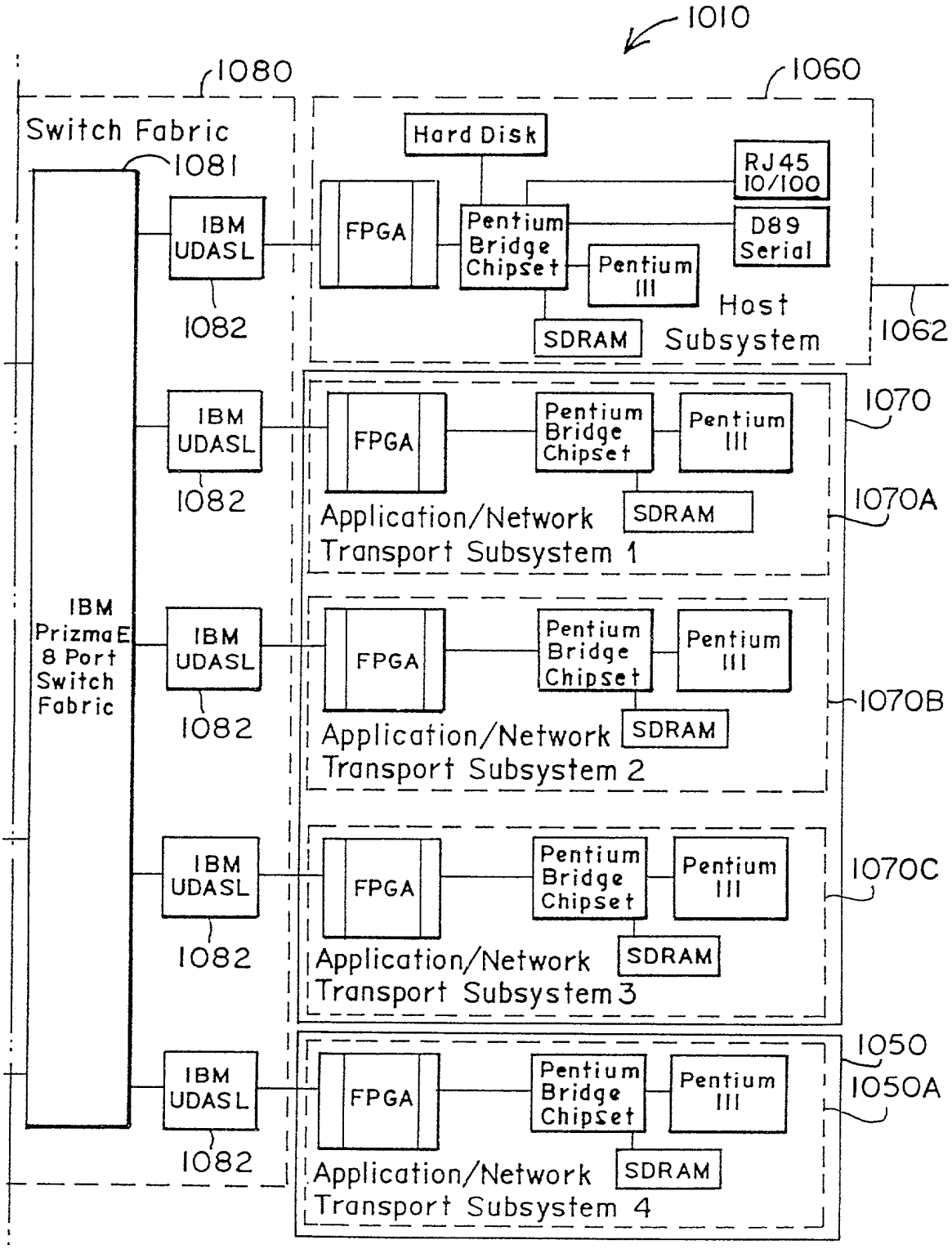
1010
1080
1060
Switch Fabric
1081
Hard Disk
RJ45 10/100
D89 Serial
IBM UDASL
FPGA
Pentium Bridge Chipset
Pentium III
SDRAM
Host Subsystem
1062
1082
1070
1070A
Application/Network Transport Subsystem 1
1070B
Application/Network Transport Subsystem 2
1070C
Application/Network Transport Subsystem 3
1050
1050A
Application/Network Transport Subsystem 4
IBM PrizmaE 8 Port Switch Fabric

FIG. 1E[11]

FIG.IF | FIG.IF' | FIG.IF''

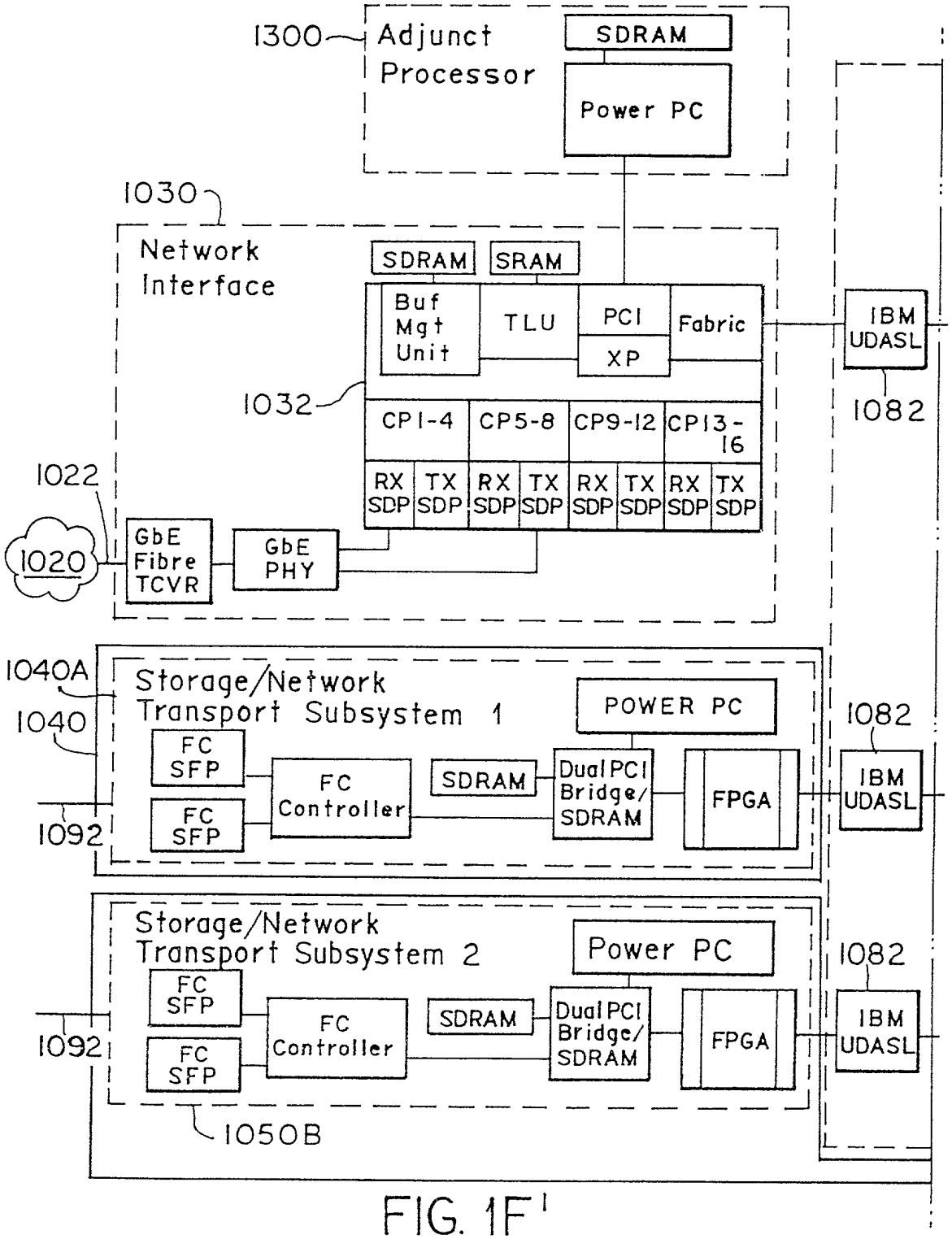

FIG. 1F'

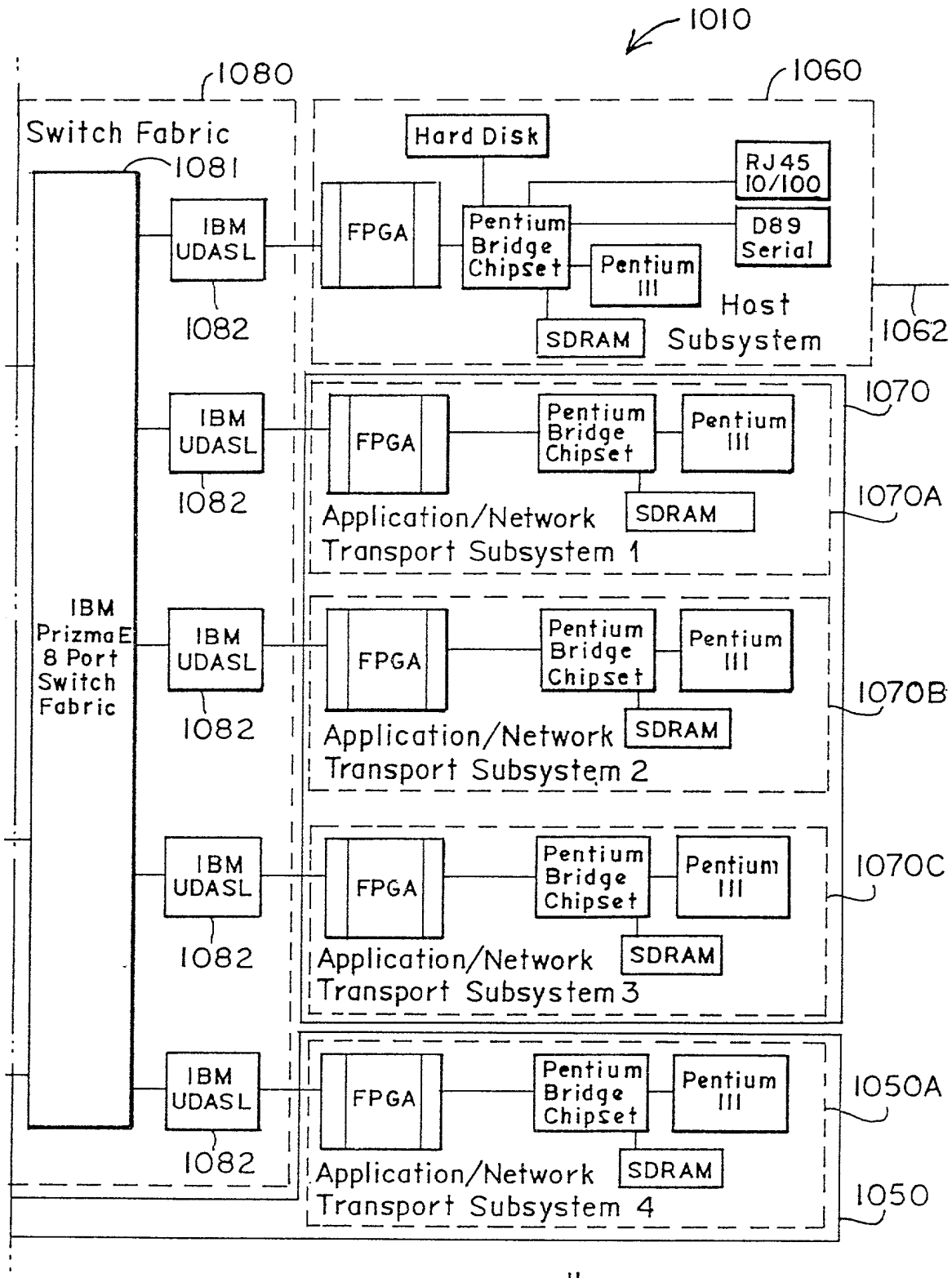
1010
1080
1060
Switch Fabric
1081
Hard Disk
RJ45 10/100
D89 Serial
IBM UDASL
FPGA
Pentium Bridge Chipset
Pentium III
SDRAM
Host Subsystem
1062
1082
1070
1070A
Application/Network Transport Subsystem 1
1070B
Application/Network Transport Subsystem 2
1070C
Application/Network Transport Subsystem 3
1050A
Application/Network Transport Subsystem 4
1050
IBM PrizmaE 8 Port Switch Fabric

FIG. 1F[11]

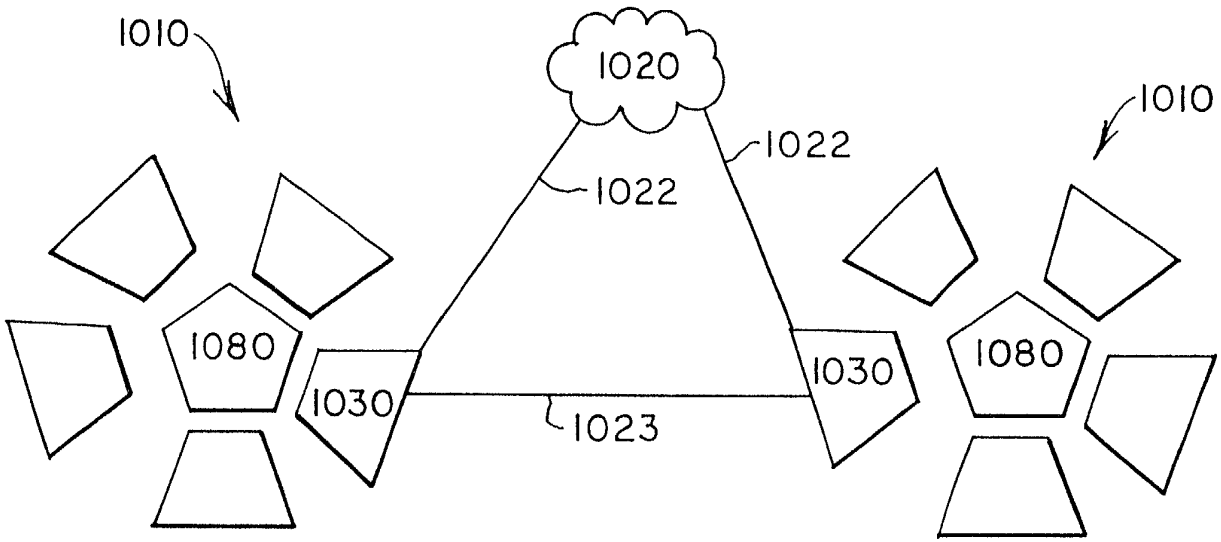

FIG. 1G

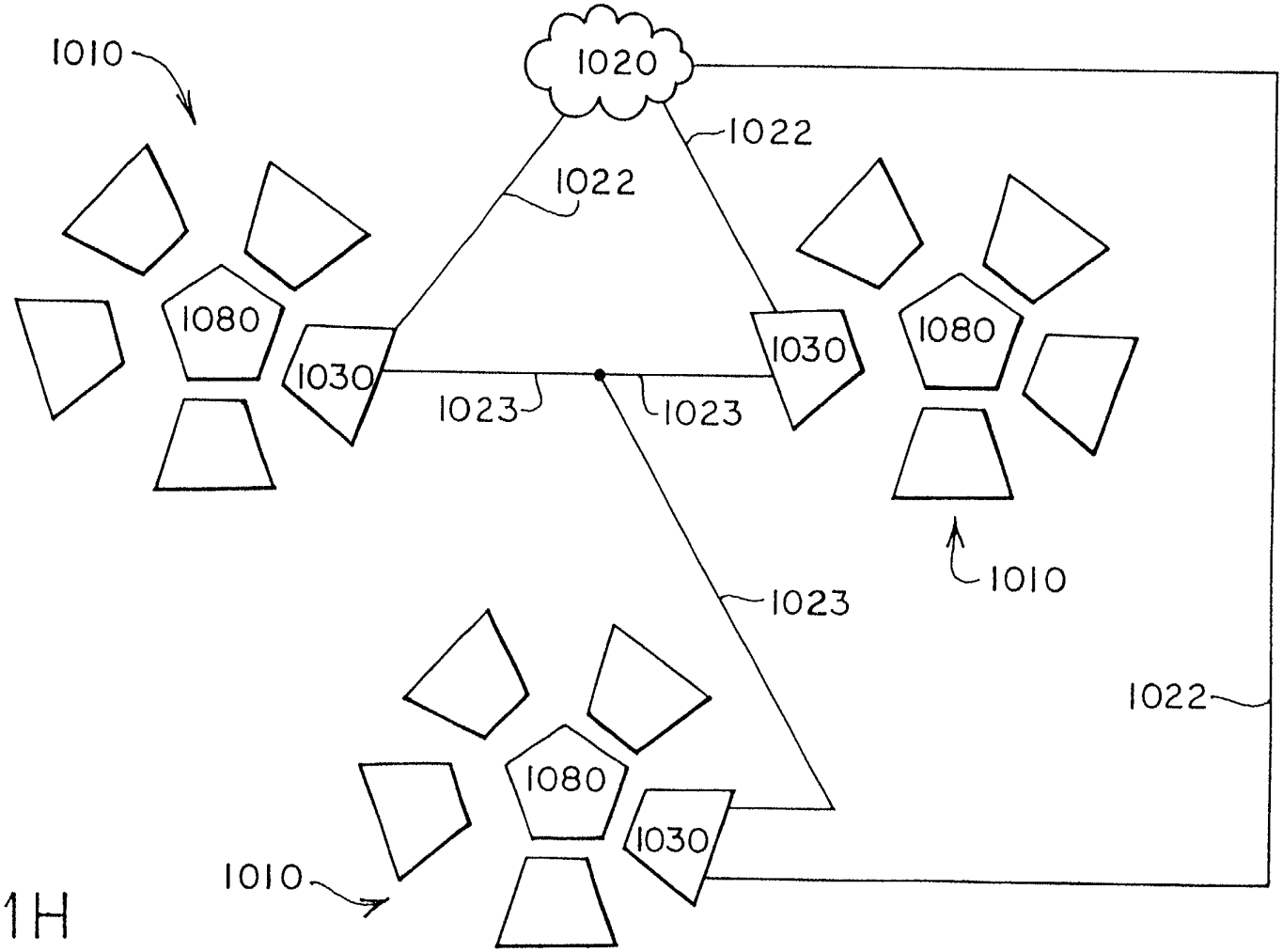
1010
1020
1022
1022
1080
1030
1030
1080
1023
1023
1010
1023
1022
1080
1030
1010

FIG. 1H

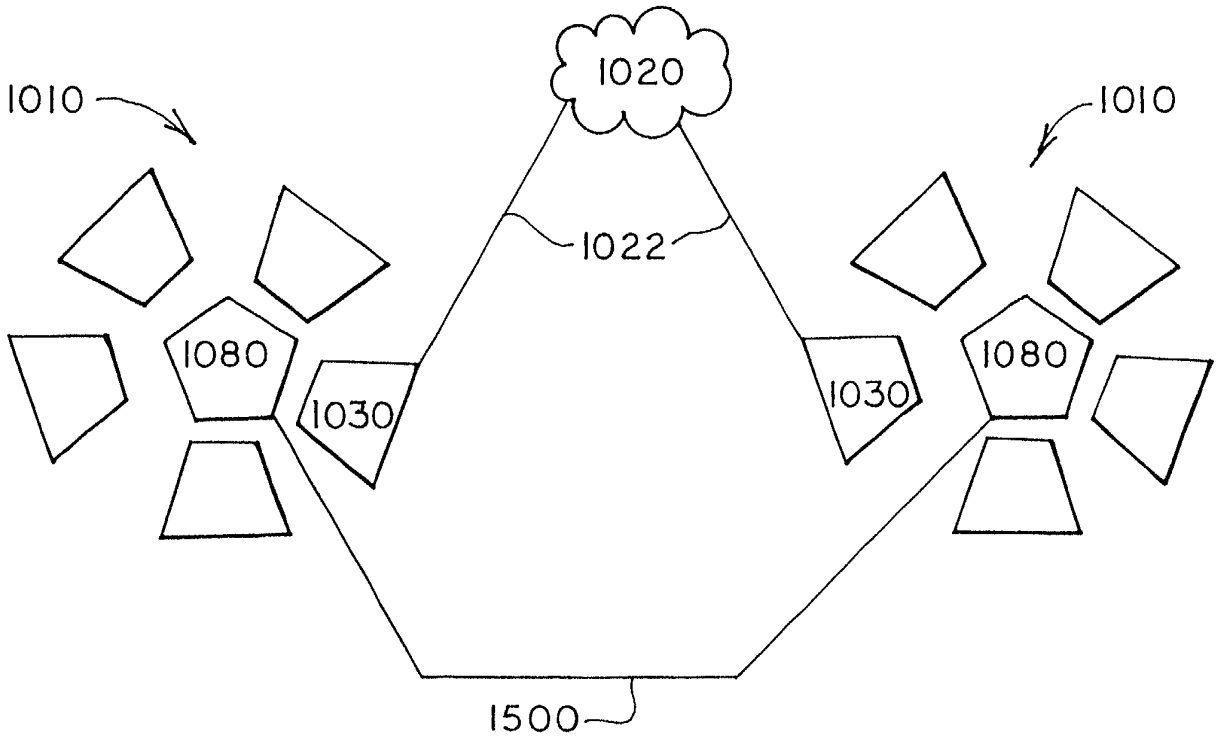

FIG. 1I

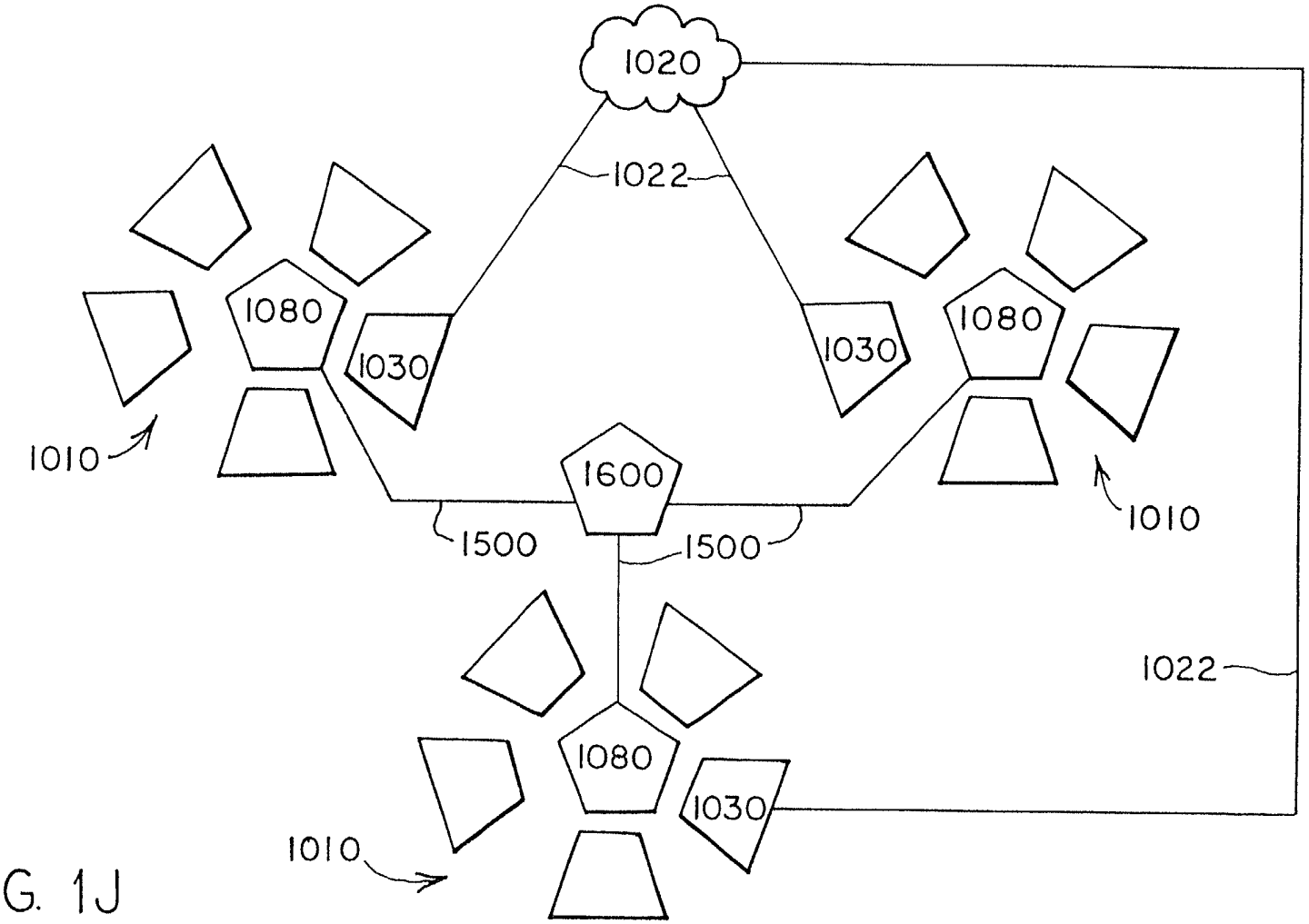
1020
1022
1080
1030
1030
1080
1010
1600
1010
1500
1500
1022
1080
1030
1010

FIG. 1J

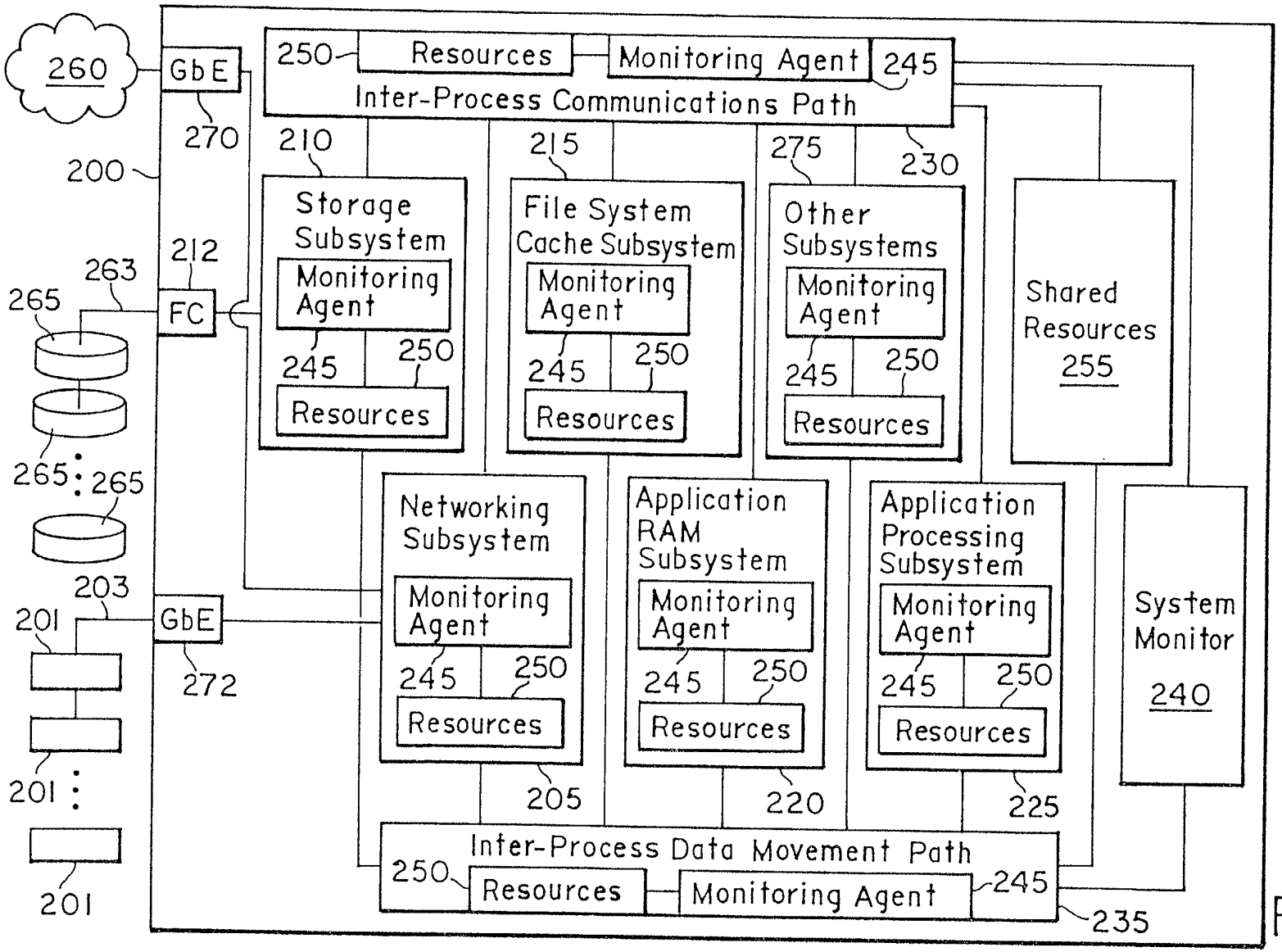
260
GbE
270
200
250
Resources
Monitoring Agent
245
Inter-Process Communications Path
210
215
275
230
Storage Subsystem
Monitoring Agent
245
250
Resources
File System Cache Subsystem
Monitoring Agent
245
250
Resources
Other Subsystems
Monitoring Agent
245
250
Resources
Shared Resources
255
212
263
265
FC
265
265
203
201
GbE
272
201
201
Networking Subsystem
Monitoring Agent
245
250
Resources
205
Application RAM Subsystem
Monitoring Agent
245
250
Resources
220
Application Processing Subsystem
Monitoring Agent
245
250
Resources
225
System Monitor
240
Inter-Process Data Movement Path
250
Resources
Monitoring Agent
245
235

FIG. 2

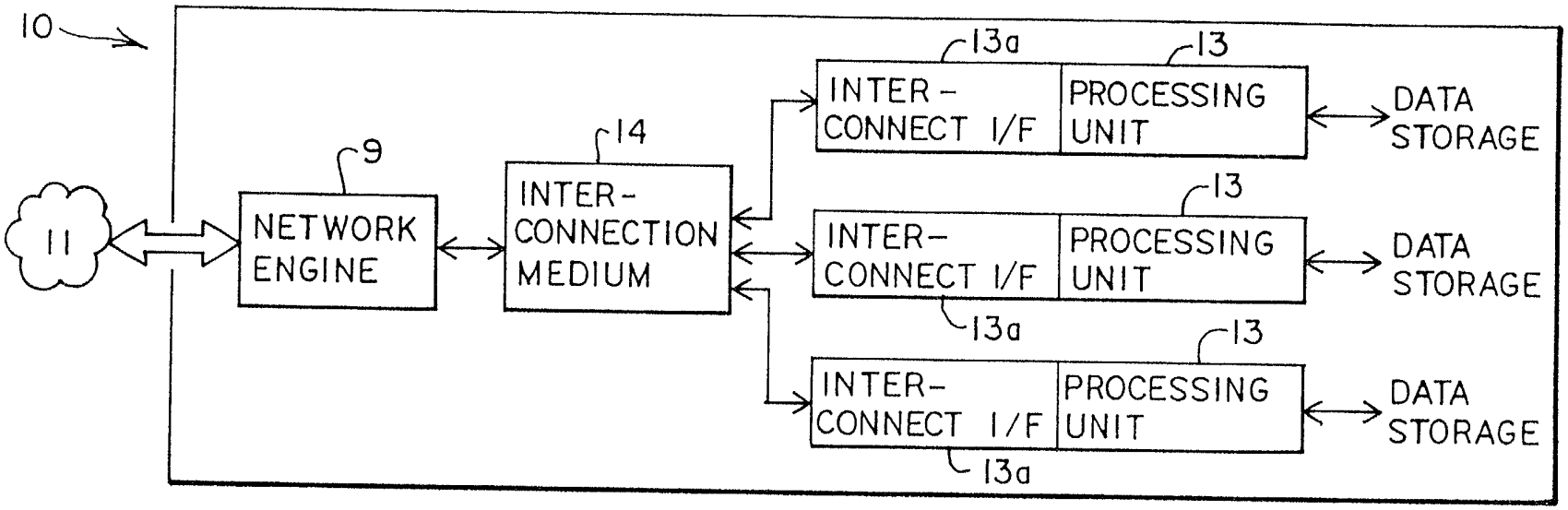
10
11
NETWORK ENGINE
9
INTER-CONNECTION MEDIUM
14
INTER-CONNECT I/F
13a
PROCESSING UNIT
13
DATA STORAGE
INTER-CONNECT I/F
13a
PROCESSING UNIT
13
DATA STORAGE
INTER-CONNECT I/F
13a
PROCESSING UNIT
13
DATA STORAGE

FIG. 2A

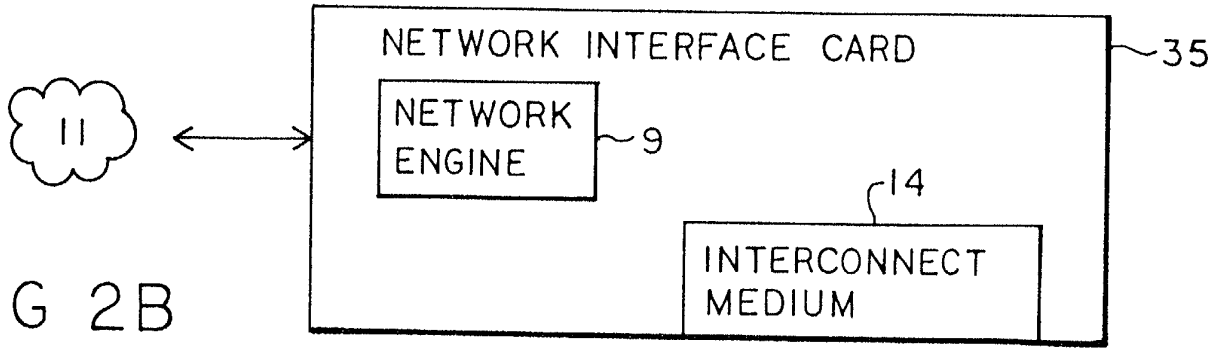
11
NETWORK INTERFACE CARD
35
NETWORK ENGINE
9
14
INTERCONNECT MEDIUM

FIG 2B

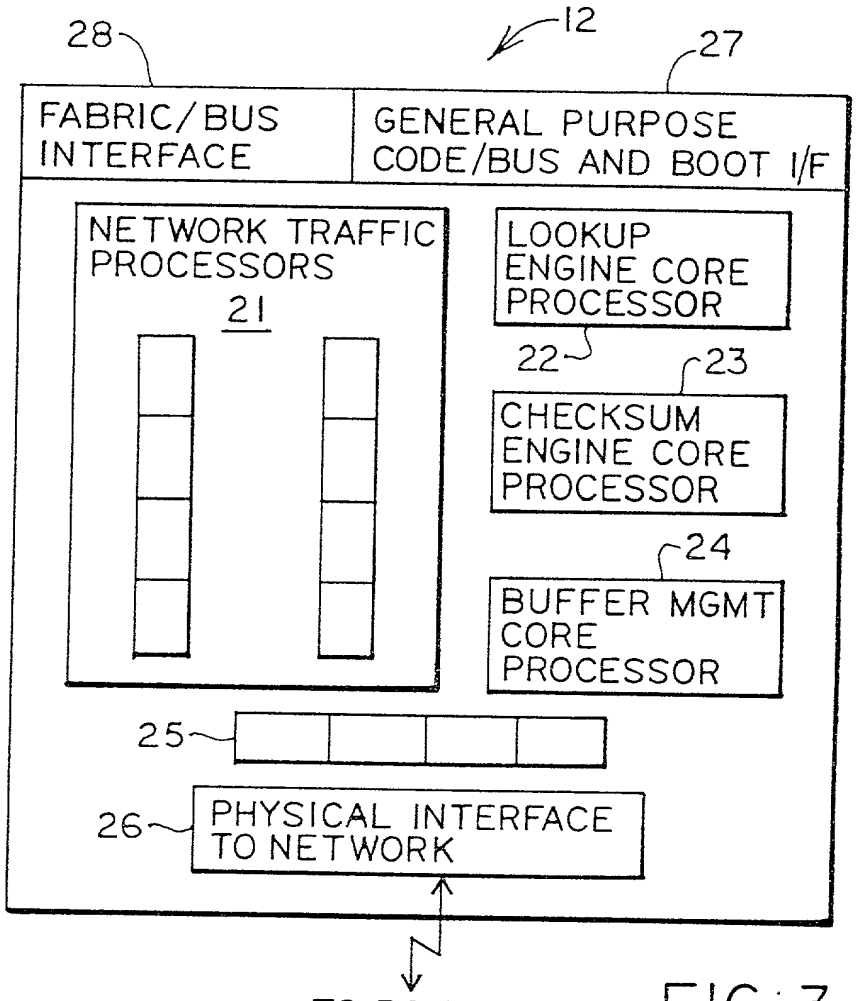
12
28
27
FABRIC/BUS INTERFACE
GENERAL PURPOSE CODE/BUS AND BOOT I/F
NETWORK TRAFFIC PROCESSORS
21
LOOKUP ENGINE CORE PROCESSOR
22
23
CHECKSUM ENGINE CORE PROCESSOR
24
BUFFER MGMT CORE PROCESSOR
25
26
PHYSICAL INTERFACE TO NETWORK
TO ROUTER

FIG. 3

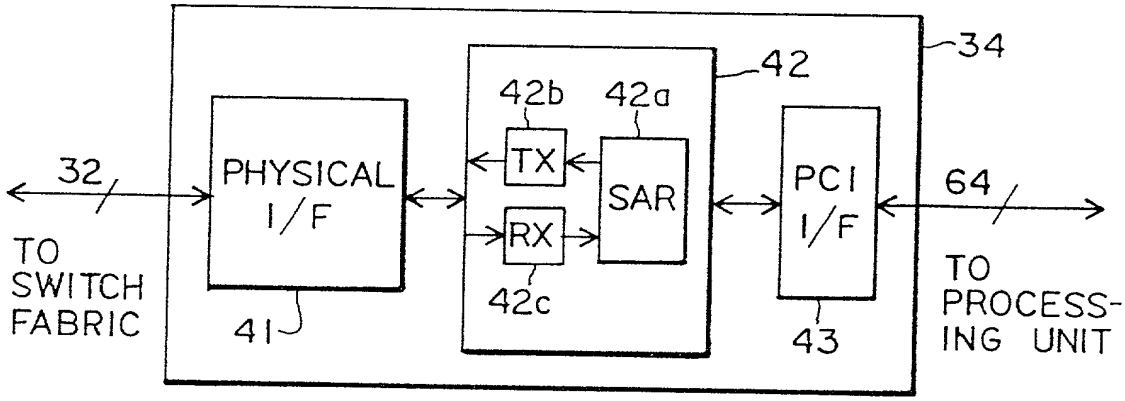
34
42
42b
42a
32
PHYSICAL I/F
TX
SAR
PCI I/F
64
RX
42c
TO SWITCH FABRIC
41
43
TO PROCESS-ING UNIT

FIG. 4

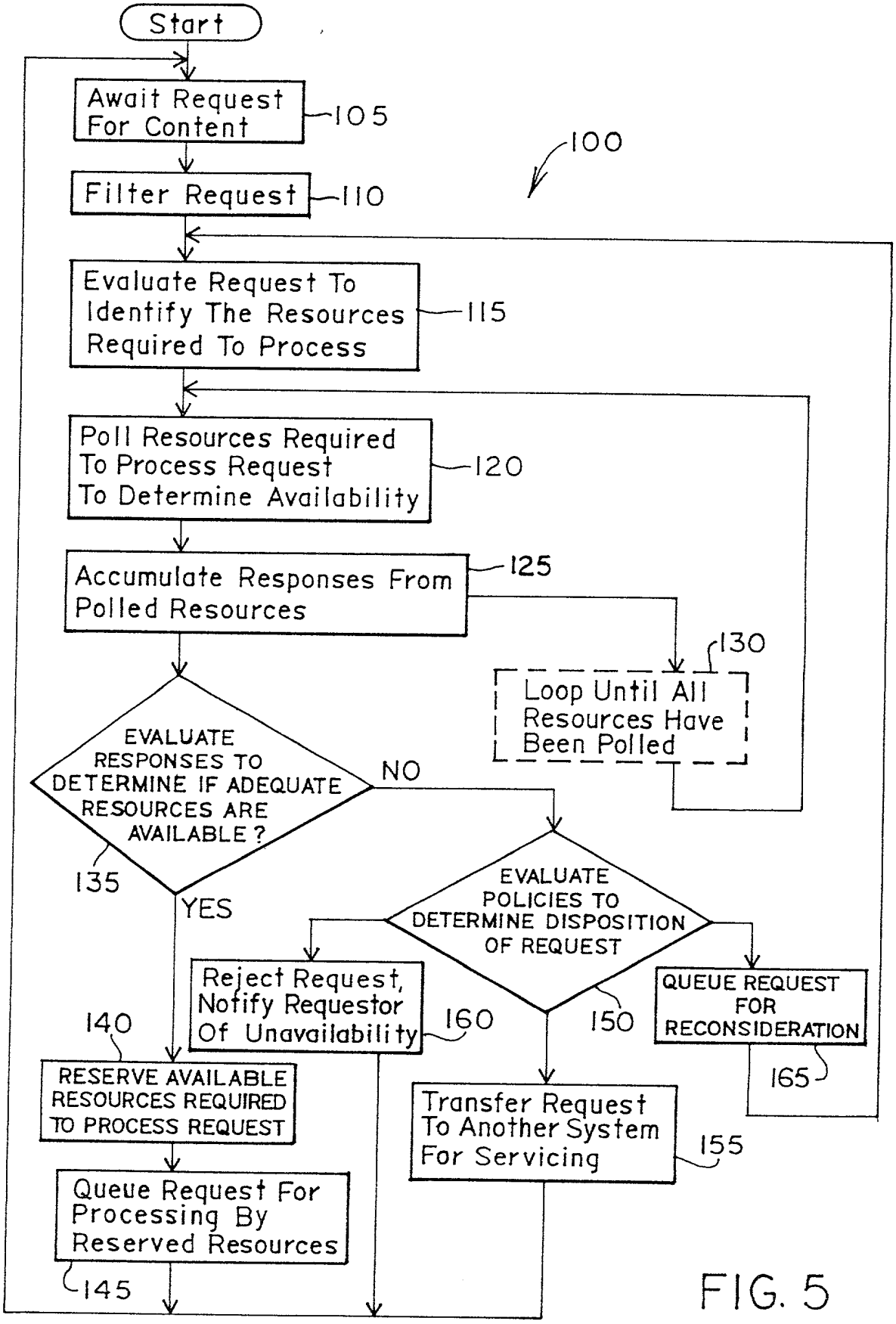
Start
Await Request For Content
105
100
Filter Request
110
Evaluate Request To Identify The Resources Required To Process
115
Poll Resources Required To Process Request To Determine Availability
120
Accumulate Responses From Polled Resources
125
130
Loop Until All Resources Have Been Polled
EVALUATE RESPONSES TO DETERMINE IF ADEQUATE RESOURCES ARE AVAILABLE ?
NO
135
YES
EVALUATE POLICIES TO DETERMINE DISPOSITION OF REQUEST
150
Reject Request, Notify Requestor Of Unavailability
160
QUEUE REQUEST FOR RECONSIDERATION
165
140
RESERVE AVAILABLE RESOURCES REQUIRED TO PROCESS REQUEST
Transfer Request To Another System For Servicing
155
Queue Request For Processing By Reserved Resources
145

FIG. 5

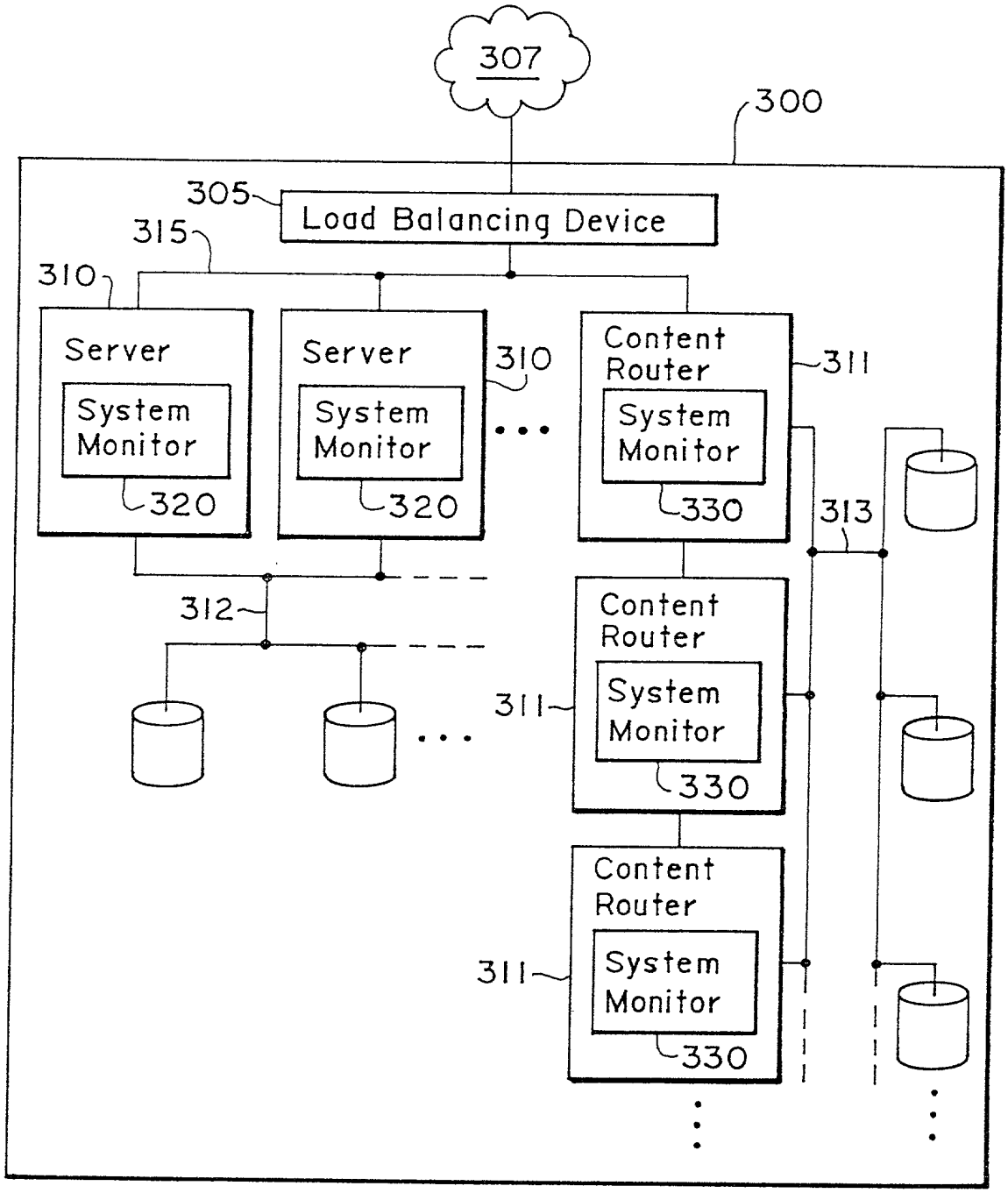
307
300
305
Load Balancing Device
315
310
Server
System Monitor
320
Server
System Monitor
320
310
Content Router
System Monitor
330
311
313
312
Content Router
System Monitor
330
311
Content Router
System Monitor
330
311

FIG. 6

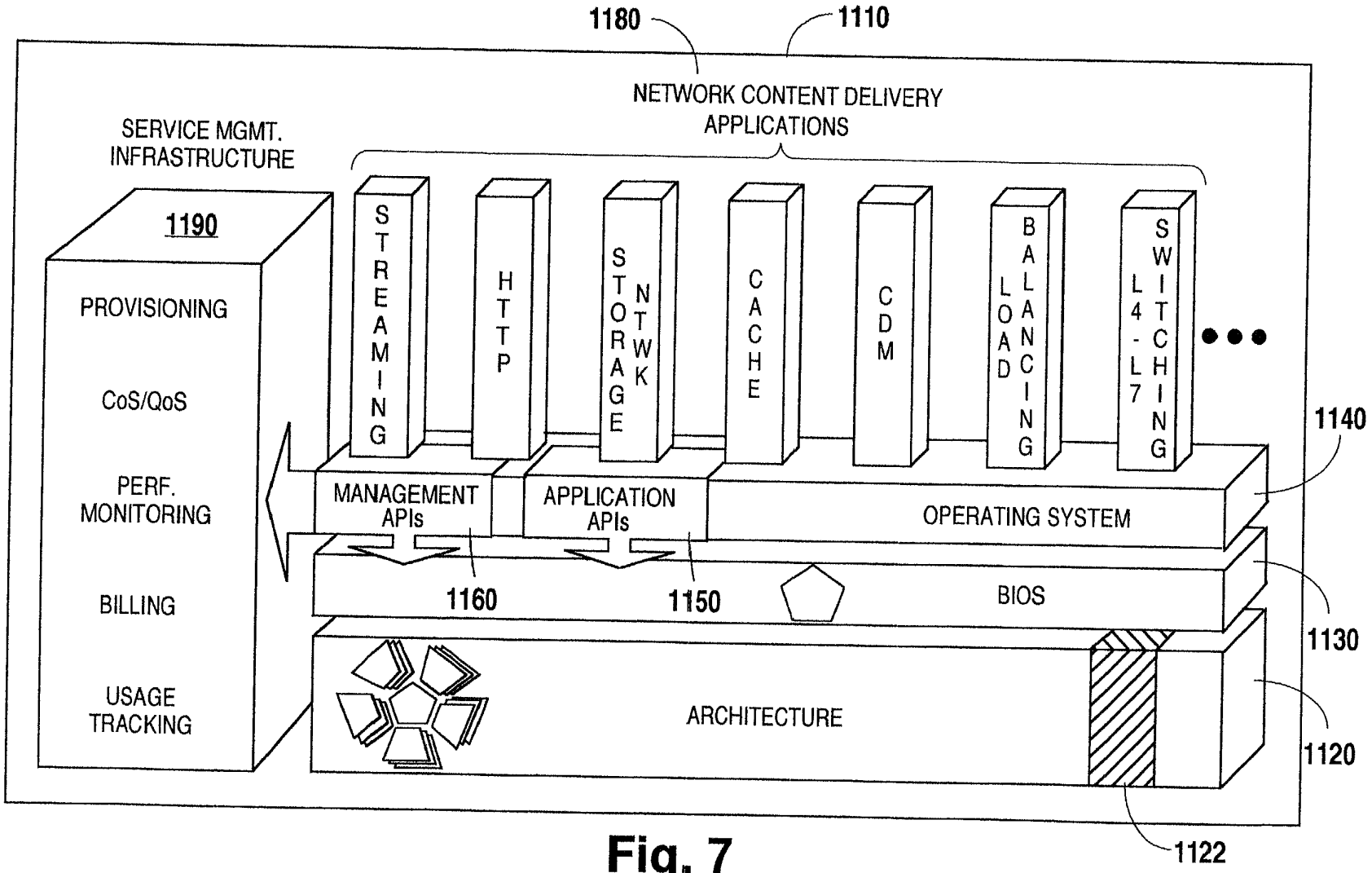
1180
1110
NETWORK CONTENT DELIVERY APPLICATIONS
SERVICE MGMT. INFRASTRUCTURE
1190
PROVISIONING
CoS/QoS
PERF. MONITORING
BILLING
USAGE TRACKING
STREAMING
HTTP
STORAGE NTWK
CACHE
CDM
LOAD BALANCING
L4-L7 SWITCHING
MANAGEMENT APIs
APPLICATION APIs
OPERATING SYSTEM
1160
1150
BIOS
ARCHITECTURE
1140
1130
1120
1122

Fig. 7

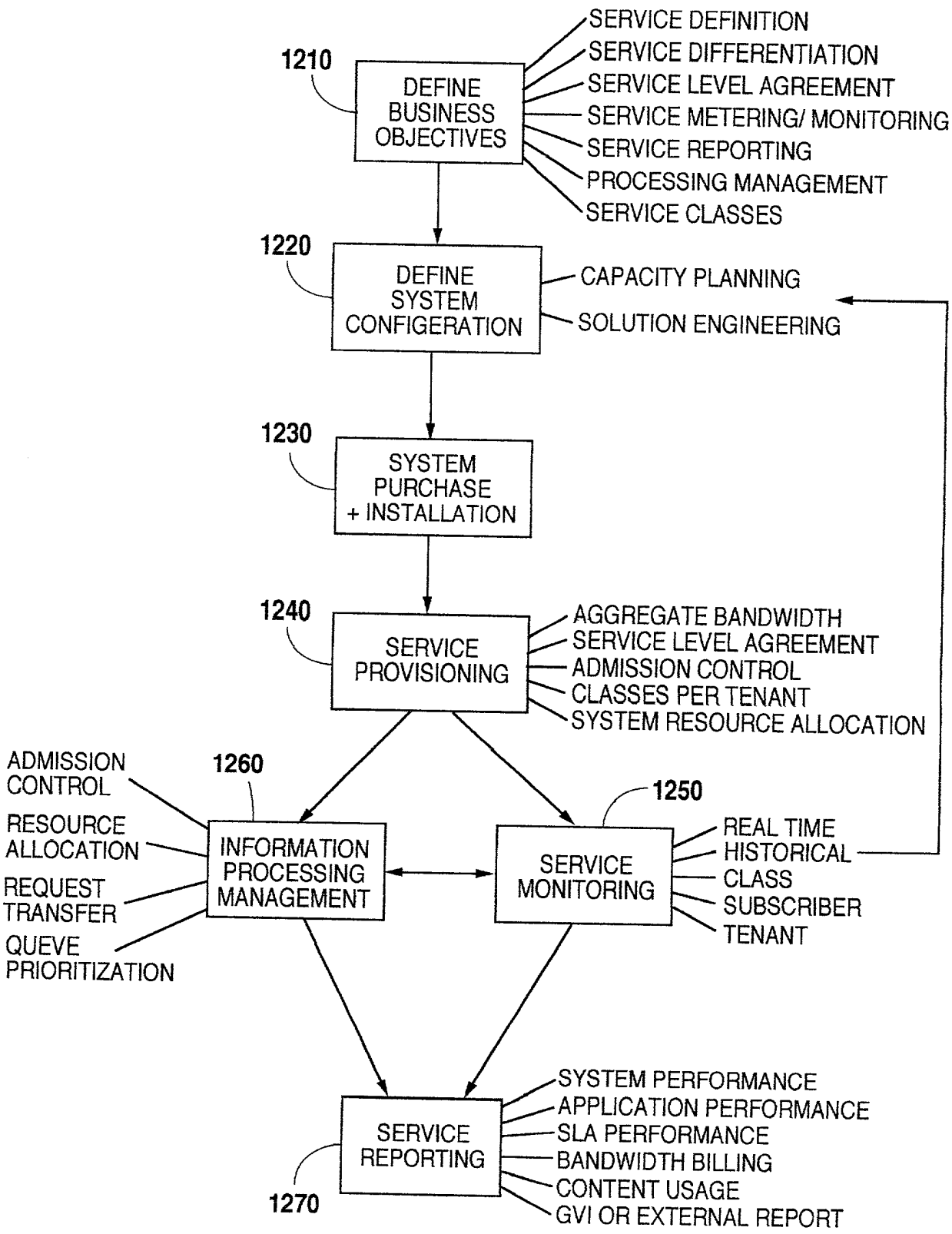
1210
DEFINE BUSINESS OBJECTIVES
SERVICE DEFINITION
SERVICE DIFFERENTIATION
SERVICE LEVEL AGREEMENT
SERVICE METERING/ MONITORING
SERVICE REPORTING
PROCESSING MANAGEMENT
SERVICE CLASSES
1220
DEFINE SYSTEM CONFIGERATION
CAPACITY PLANNING
SOLUTION ENGINEERING
1230
SYSTEM PURCHASE + INSTALLATION
1240
SERVICE PROVISIONING
AGGREGATE BANDWIDTH
SERVICE LEVEL AGREEMENT
ADMISSION CONTROL
CLASSES PER TENANT
SYSTEM RESOURCE ALLOCATION
ADMISSION CONTROL
1260
RESOURCE ALLOCATION
REQUEST TRANSFER
QUEVE PRIORITIZATION
INFORMATION PROCESSING MANAGEMENT
1250
SERVICE MONITORING
REAL TIME
HISTORICAL
CLASS
SUBSCRIBER
TENANT
SERVICE REPORTING
1270
SYSTEM PERFORMANCE
APPLICATION PERFORMANCE
SLA PERFORMANCE
BANDWIDTH BILLING
CONTENT USAGE
GVI OR EXTERNAL REPORT

Fig. 8

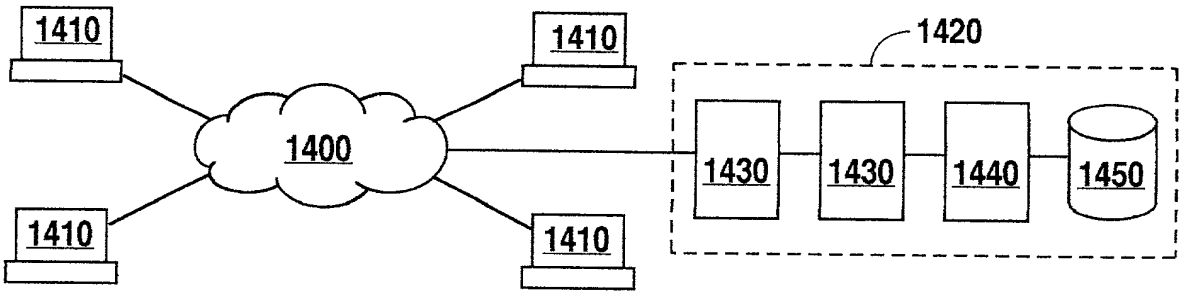

Fig. 9A

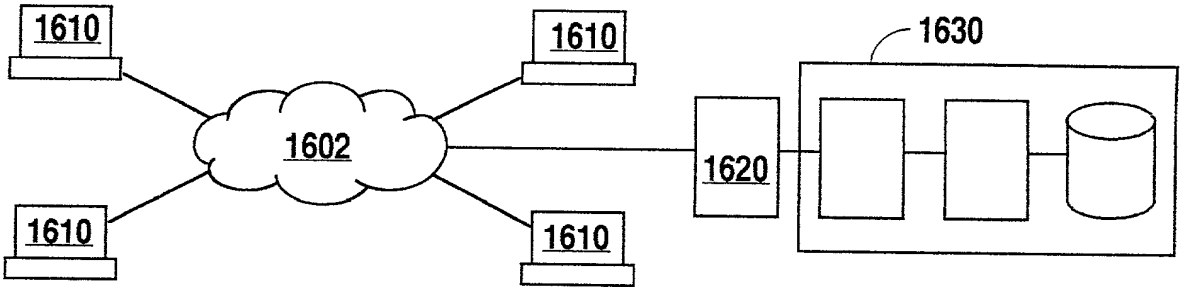

Fig. 9B

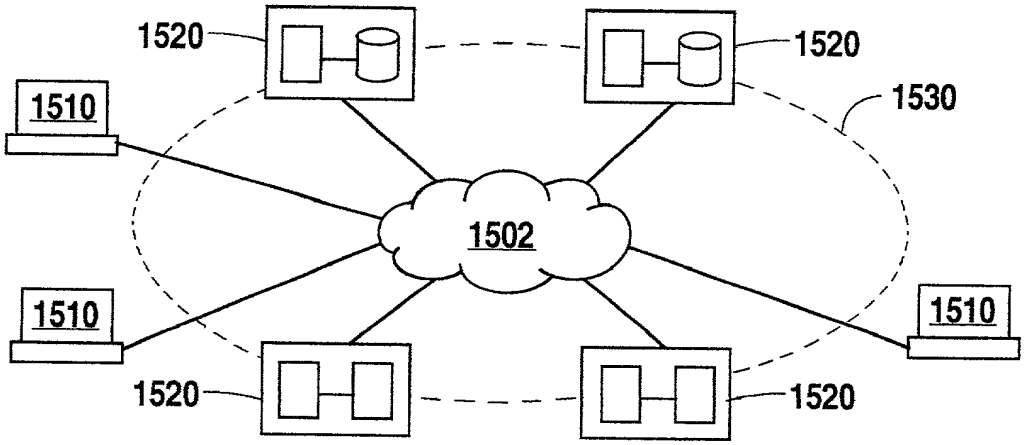

Fig. 9C

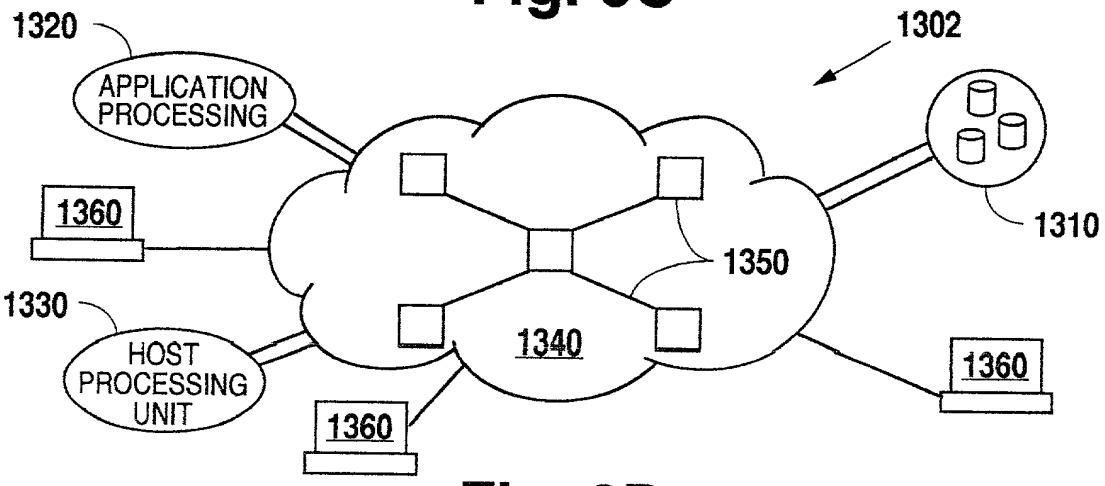

Fig. 9D

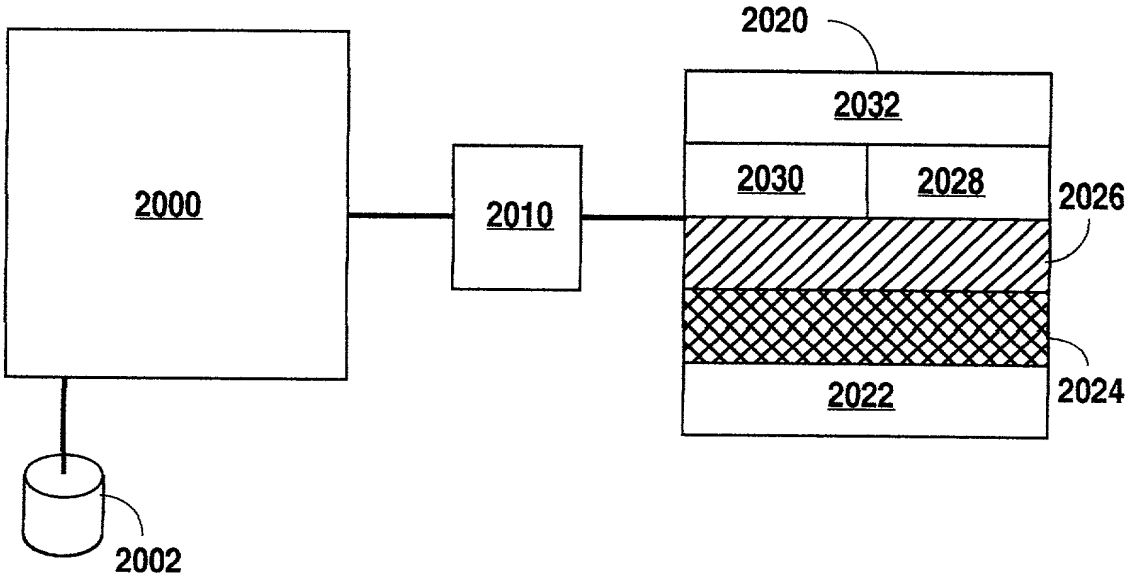
2020
2032
2000
2010
2030
2028
2026
2024
2022
2002

Fig. 10

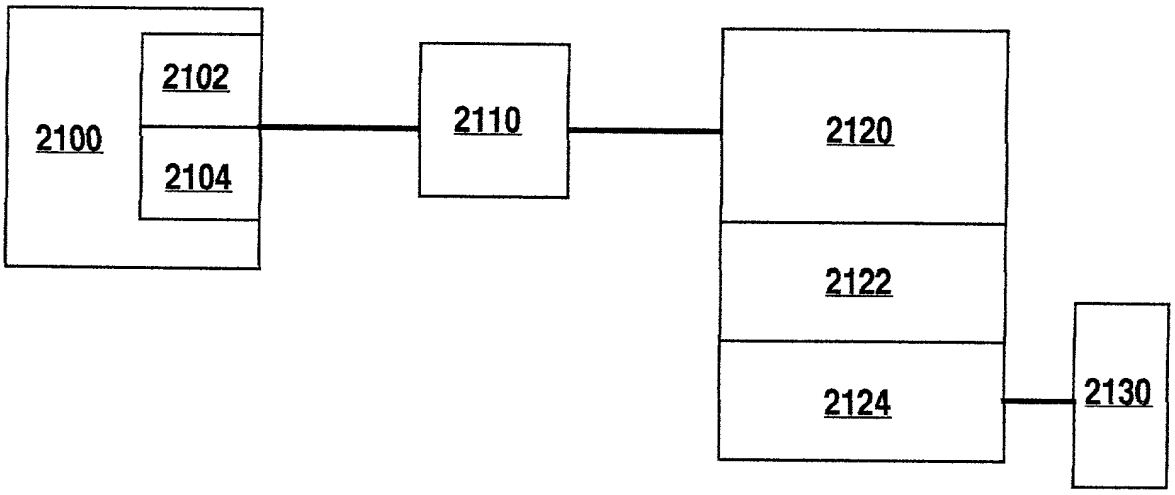
2102
2100
2104
2110
2120
2122
2124
2130

Fig. 11

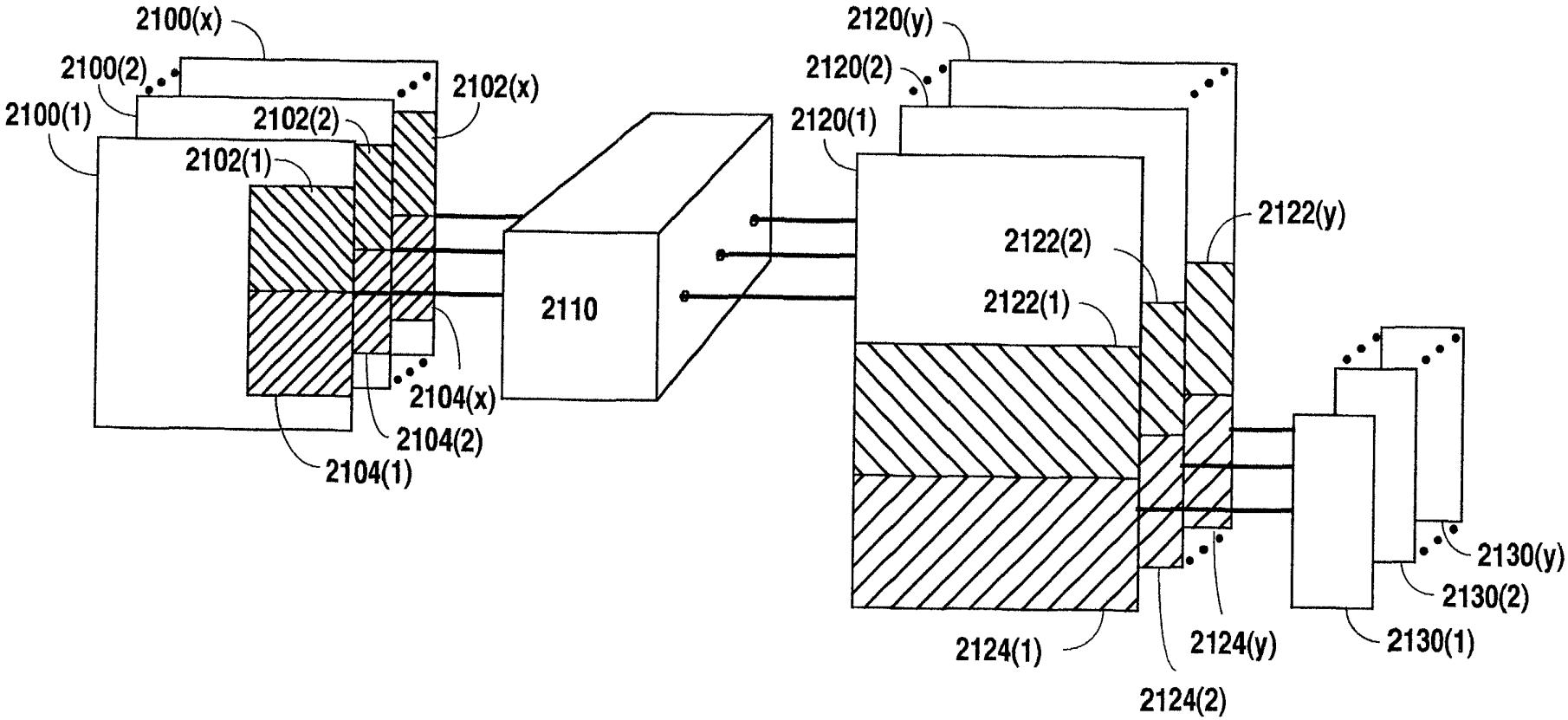

Fig. 12

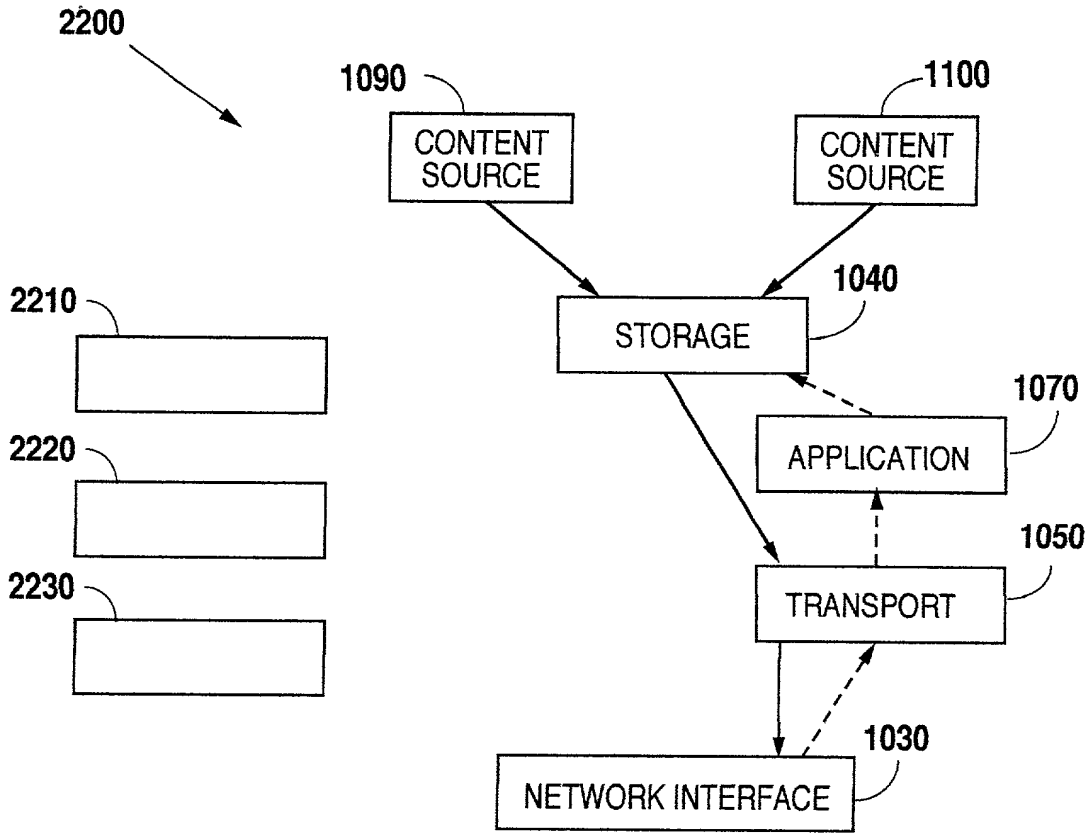
2200
1090
CONTENT SOURCE
1100
CONTENT SOURCE
2210
1040
STORAGE
1070
APPLICATION
2220
1050
TRANSPORT
2230
1030
NETWORK INTERFACE

Fig. 13

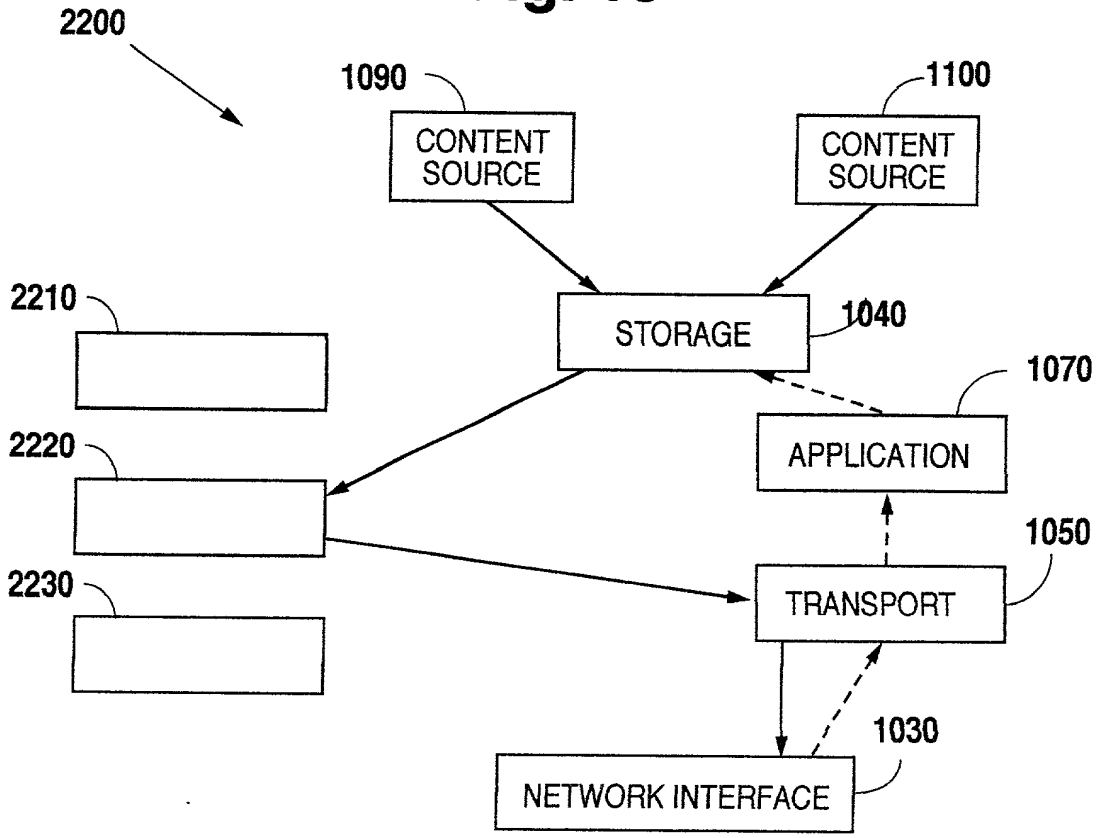
2200
1090
CONTENT SOURCE
1100
CONTENT SOURCE
2210
1040
STORAGE
1070
APPLICATION
2220
1050
TRANSPORT
2230
1030
NETWORK INTERFACE

Fig. 14

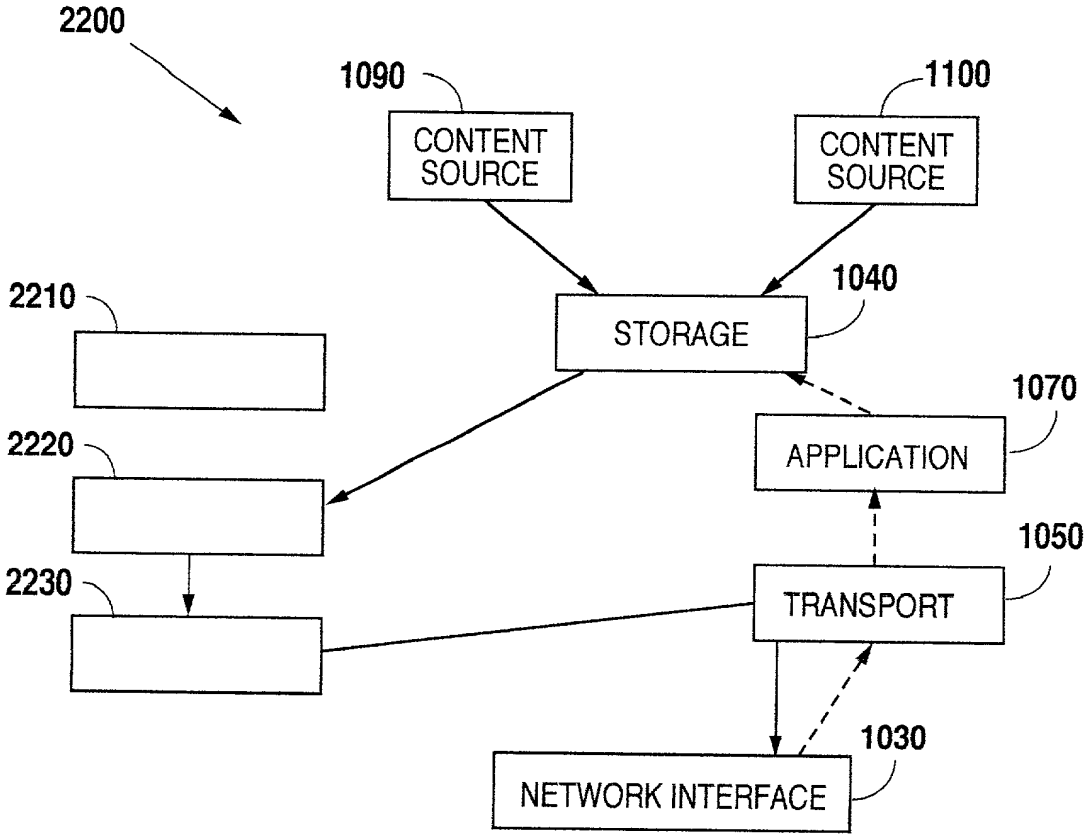
2200
1090
CONTENT SOURCE
1100
CONTENT SOURCE
2210
1040
STORAGE
1070
APPLICATION
2220
1050
2230
TRANSPORT
1030
NETWORK INTERFACE

Fig. 15

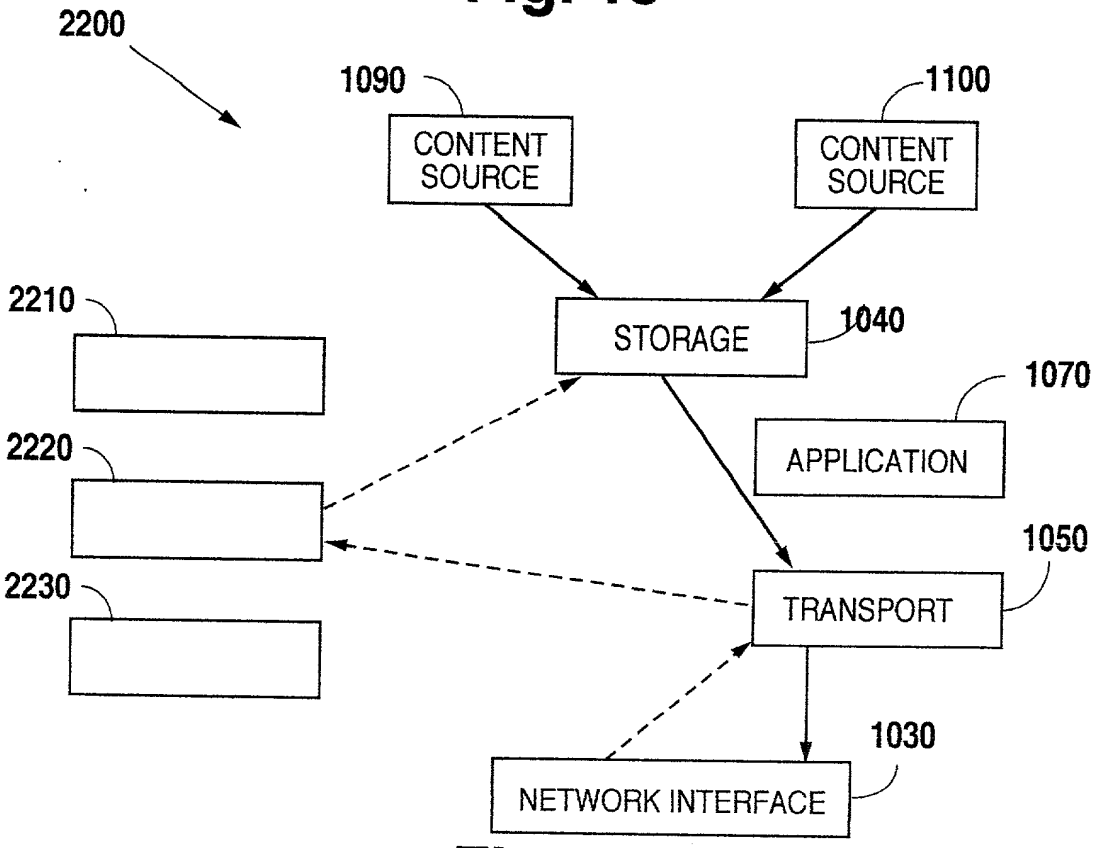
2200
1090
CONTENT SOURCE
1100
CONTENT SOURCE
2210
1040
STORAGE
1070
APPLICATION
2220
1050
2230
TRANSPORT
1030
NETWORK INTERFACE

Fig. 16